

# Boulder County Parks and Open Space 2018 Burrowing Owl Monitoring Summary



**Prepared by:**

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## Introduction

For the eleventh consecutive year, Boulder County Nature Association and Boulder County Audubon Society recruited volunteers to monitor Boulder County Parks and Open Space properties for nesting burrowing owls. The purpose of this study is to locate burrowing owl nests in prairie dog colonies, determine the rate of nesting success, and devise strategies for protecting and enhancing nesting areas.

At a volunteer training in April we assigned prairie dog colonies to individual volunteers or small teams of volunteers. Monitoring was conducted from mid-April to early October, with each volunteer or team of volunteers visiting their adopted prairie dog colony one time during each of four survey blocks. Volunteers who discover nesting burrowing owls on their assigned colony begin weekly monitoring until the owls depart the nesting territory, usually in September or October.

## Methods

General surveys consisting of ten-minute observations from fixed points were conducted from approximately 110 points on 30 properties. There are four general survey periods, with at least one survey occurring within each of four time periods: 15 April-15 May, 16 May-15 June, 16 June-15 July, and 16 July-15 August. Suspected nests were observed weekly until all young had fledged or the nesting attempt was determined to have failed. Volunteers submitted a field form after each observation detailing what they had seen. Volunteers are encouraged to continue observation and reports while young disperse throughout the colony, which assists staff with internal management inquiries that continue into fall. Volunteers are also asked to submit observations of other raptors and other Boulder County birds of special concern (Hallock and Jones 2010).

During 2018, 25 volunteers plus 1 seasonal staff and 2 staff biologists devoted 498 total hours to the training, monitoring, and data compilation effort. Total hours are generally higher, however not all staff site visits or meetings with volunteers are recorded.

- 410 recorded volunteer and staff field hours

- 48 indoor and outdoor training hours

- 40 hours for training, coordination, and compilation support by Sue Cass and Steve Jones

## Results and Discussion

Burrowing owls were observed on seven Boulder County Parks & Open Space properties: two nests west of Longmont; one nest north of Longmont; five nests west of Superior; and one nest south of Lafayette. One previously occupied territory south of Longmont had owls present in April but no nest event was observed. The Longmont-area nests produced three and four young each and fledged a total of ten young. One nest south of Lafayette fledged at least three of five young. The five nests west of Superior fledged at least fifteen young. County Parks and Open Space properties fledged at least 27 young owls, with an additional 34 fledged from 10 additional nest sites monitored by City of Boulder’s Open Space and Mountain Parks division. One additional nest on private land fledged 4 owls. No nests were reported on City of Boulder Parks and Recreation land this year.

## Sensitive Data Policy

In March 2015, Boulder County Parks and Open Space adopted a Sensitive GIS Data Policy which describes the criteria used for determining which data are sensitive, and provides guidance for the handling, release, and protection of information related to those cultural and natural resources. As stewards of natural resources, BCPOS has the responsibility to balance the protection of these resources - in this case the nest sites of rare, declining, and protected species- with the desire of the community to utilize, appreciate, and preserve them. For this reason, annual summaries of burrowing owl monitoring do not include discrete locations or detailed maps of nest sites, but will provide general locality so that participants might understand the distribution of the species from year to year.

## 2018 Nesting Observations

**Table 1. 2017 Burrowing Owl Nesting Chronology**

Site	Nests	Young	Flying young	Dates adults observed	Dates young observed
Northwest county	1	4	4	23 April-29 July	25 June-8 July*
Northwest county	1	3	1	22 July-9 August	22 July-2 August
Southwest county	1	1	1	1 June -29 July	July 2- July 3
Northeast county	1	4	4	1 June-31 July	22 June-31 July
Southwest county	4	14 (4, 3, 3, 4)	13	2 July-13 August	2 July-16 August
Southeast county	1	5	3	4 April- 8 September	10 June- 8 September
Northeast county	Territory	0	0	14-26 April	
<b>Total</b>	<b>9</b>	<b>31</b>	<b>26</b>	<b>4 April-8 September</b>	<b>10 June-8 September</b>

Figure 1: Occurrence of nesting burrowing owls on Boulder County Open Space

- 1998-2017
- 2018

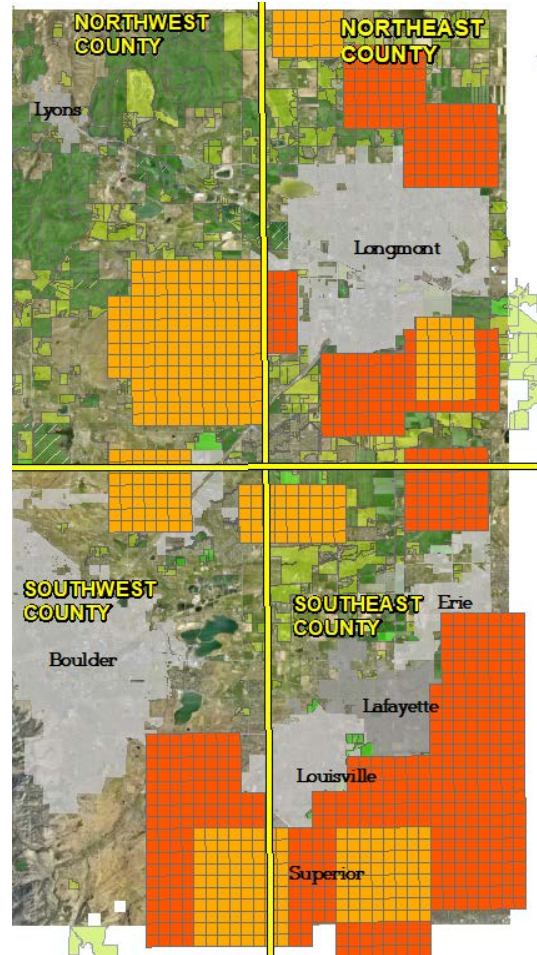
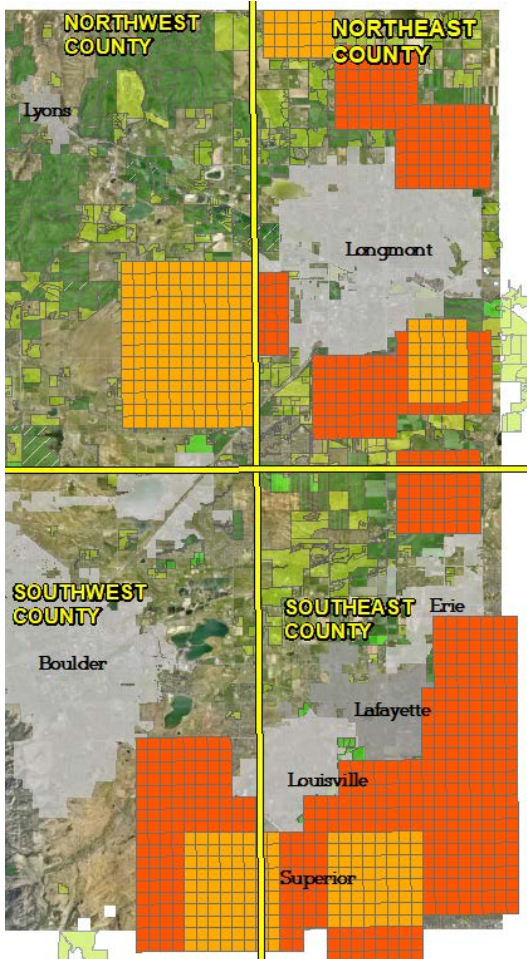


Figure 2: Countywide occurrence of nesting burrowing owls in 2018.

## Northwest County

### SITE 1:

*A pair of burrowing owls was located in late April and observed performing courtship behaviors. Previous nesting occurred in this general area in 2009 and 2012, and in 2013 when a single male held the territory for three weeks but did not have a mate. In 2012 an additional pair exhibiting courtship behavior was located in a small, vacant pasture, but left the site after a few dozen cows were rotated through. This season, the owls were active and near a trail, yet few recreationists appeared to notice the owls and no disturbance events were recorded.*

*Grazing is the primary activity on northwest parcels with active nest sites, and due to agricultural use, most of these parcels are categorized as No Prairie Dog category in the 2012 Prairie Dog Habitat Element of the Grassland and Shrubland Management Policy. Adjacent landowners regularly request the County reduce prairie dog colony size and numbers on these parcels.*

23 April, 1200-1230. Pair located north of Prospect Road (Smith).

29 April, 1900-2015. Pair observed copulating near 203 (Bryan).

29 April, 0800-0900. One adult standing next to burrow near fence north of Prospect Road (Peyevich and Friedberg).

29 April, 1900-2015. Pair observed north of Prospect Road (Peyevich and Friedberg).

6 May, 0825-0836. Adult pair perching on burrow mound, moving in and out is suspected nesting burrow, and copulating (Peyevich and Friedberg).

6 May, 1000-1025. Pair observed, same location (Peyevich and Friedberg).

21 May, 1800-1810. Pair observed north of Prospect (Peyevich).

21 May, 1800-1810. One adult perched close to suspected nest burrow (Peyevich and Friedberg).<sup>31</sup>

May, 1730-45. Both adults standing within 10 feet of each other, preening (Peyevich).

31 May, 1830-1845. Pair observed north of Prospect (Peyevich).

11 June, 1200-1308. Pair in same location near 203. Courtship, one flying in and out of burrow (Bryan).

20 June, 1800-1820. Both adults present, one foraging and repeatedly flying back to the suspected nest burrow (Peyevich).

20 June, 1800-1820. Pair in same location north of Prospect (Peyevich).

25 June, 1045-1115. Adult male and 3 young observed. Owlets received prey item and returned to burrow (Smith).

1 July, 1815-45. Pair and 4 young in same location. Adults appeared to be delivering prey to young owls (Peyevich).

6 July, NA. Pair and 4 young in same location near 203. Young perched atop two separate Burrows (Bryan).

6 July, 0800-0930. Both adults present and feeding 4 young (Bryan).

8 July, 1815-1900. Pair delivering prey to 3 young (Peyevich).

21 July, 0915-0930. Both adults present (Peyevich).

21 July, 1000-15. Pair and no young seen (Peyevich).

24 July 1930-1955. Both adults present, flying to different locations (Peyevich).

24 July, 0730-55. Pair and no young seen (Peyevich).

29 July, 1815-45. Adult pair and no young seen (Peyevich).

5 August. No owls seen (Peyevich).

11 August. No owls observed (Peyevich).

13 August. No owls observed (Peyevich).

**Summary: One nest with 4 young. All 4 fledged.**

#### **SITE 2:**

*An additional nest site revisited by burrowing owls and located late in the season. Burrowing owls previously used this same area in 2013, with a male on site in early April. The owl stayed for several weeks but no mate or courtship was observed. In 2018, an active nest with 3 young was confirmed by BCPOS staff in late July after a volunteer noted seeing two owls remaining in the area. A second follow-up to the nest provided observation of 3 adult owls, but it is unclear if an additional nest event occurred in the area and was missed. The primary use at AHL-Turkey Farm property is grazing, and has mixed designations as No Prairie Dog and Multiple Objective Areas. Adjacent landowners regularly request the County reduce prairie dog colony size and numbers on this property.*

10 June, 0530-0805. None observed (Andes-Georges).

16 July, 0630-0830. Two owls seen from 238 (Andes-Georges).

22 July, 0615-0815. One seen below ridge crest from 238 (Andes-Georges).

25 July, 1230-0115. Adult owls and 3 young owls located. Owlets together, low in burrow (Durant)

2 August, 1300-1345. Did not see the adults and three young owls that Jordan Smith had reported 10 days ago. Did see 3 additional adult owls and one young owl near eastern end of the Interior reservoir on south pasture (Andes-Georges and Smith).

5 August, 0745-0900. Pair seen at original nest burrow. No other owls seen (Andes-Georges).

7 August, 0810-40. Two adults and two flying young, mostly dispersed from natal burrow (Smith).

9 August, 0900-1030. Pair seen near original nest burrow (Andes-Georges).

2 October, 0200-0330. No owls observed near burrow or adjacent areas (Smith & Durant).

**Summary: One nest, 3 young. Possible second nest with 1 young.**

#### **Northeast county**

##### **Site 1:**

*The northeast quadrant of the county has had two nest sites that persisted for several years, but in 2018 an additional location was documented. In the northern edge of the county, a single owl was flushed by parks staff and wildlife staff confirmed a pair present within a few days. This pair appears experienced and comfortable with the site, and it is possible the owls have nested there before. This new northeast site is under agricultural lease for grazing, and is considered a Multiple Objective Area. Adjacent landowners do request the County reduce prairie dog colony size and numbers on occasion.*

1 June, 0800-0930. Male flushed from nest burrow while traversing property (Durant).

4 June, 0700-1015. Female apparently incubating, male flying to and from potential nest burrow. Approach within 80m elicits alerting behavior and nest avoidance (Durant).

11 June, 0830-1030. Male observed hunting (flying and hovering 15 different times) and then returning to the suspected nest burrow (near 29) with insect prey at least seven times (Durant).

22 June, 1215-1330. Pair and 3 young observed from 28R. Young still fuzzy, very awkward and not flying (Durant and Witkin).

27 June, 0930-1130. Pair and 3 young observed from 28R (Witkin).

17 July. Two adults and two perching young (Witkin).

20 July, 0845-1000. Two adults and four flying young (Durant).

22 July, 0945-1150. Adult pair plus 1-2 fledglings (Witkin).

31 July, 0900-1030. Two adults and 4 young observed still within 50m of nest site (Durant & Witkin).

**Summary: One nest, 4 flying young.**

#### **Site 2:**

*A small, isolated prairie dog colony in a pivot irrigation corner has supported an annual nest site since 2013. In 2018, the owls were present on the territory but did not nest. Site conditions were variable while re-seeding and weed control took place in hopes of restoring vegetation to maintain a small prairie dog colony. Seeding was followed by high winds and low moisture, and the site was extremely barren when the owls returned. Camera data suggests a higher than usual visitation and trespassing rate, and staff followed with improved plans for gate closure and fencing. During the early season, both nest sites appeared to have vehicles and human activity in close proximity.*

14 April, 1500-1530. One owl observed (Smith).

15 April, 0950-1130. One owl to right of entrance road flew to a burrow mound where second owl was perching. Courtship observed (Pem).

23 April. None observed (Pems).

26 April, 1500-1530. One observed 40 m from western border of agricultural field (Smith).

27 April, 1600-1700. Staff observes one owl on west edge of colony (Durant and Spaulding).

28 April, 1830-1900. No owls observed (Pems).

2 May, 0900-0930. Staff install game camera, aural detection of owl (Smith and Durant). Several days of steady rain followed.

3 May, 0700-0800. Agriculture staff report two owls observed on colony early in season.

8 May, 0900-1000. No owls observed (Pems).

16 May, 24 May, 0940-1010. No owls observed (Pems).

12 June, 0740-0800. No owls observed (Pems).

15 July. No owls observed (Pems).

15 August. No owls observed (Pems).

**Summary: One territory, no young.**

## Southwest county

*The south county grasslands area often has at least one nesting pair, but 2018 was a banner year with five pairs of nesting owls located on Boulder County parcels. Much of this area is categorized as Habitat Conservation Area and suitable for prairie dog occupation. It is actively grazed using a rotational grazing plan. Currently, prairie dog colonies are treated annually with sylvatic plague vaccine in hopes of maintaining or increasing their numbers.*

### Site 1:

*A first-time nest event was recorded in 2017 with owls returning to the site in 2018. This year the owls moved uphill to a location the family group frequented last year.*

12 April, 1000-1100. Adult observed on fenceline north of 2017 nest site (Smith).

1 June, 815-1100. One individual near 19, flying to burrow and possibly entering burrow (Wing).

5 June, 0830-0845. Male and female allopreening on nest burrow (Durant).

2 July, 0800-0845. One juvenile owl attended by female at nest, male on fenceline (Durant).

3 July, 0700-0730. One juvenile standing on nest, no adults observed (Durant).

9 July, 0930-1230. One seen flying from 180 (Wing).

20 July, 0844-0945. One flying near 2017 nest site (Smith).

23 July, 1030-1050. One juvenile standing on burrow looking around (Smith).

29 July. One going into burrow near 19 (Wing).

6 August. None observed (Wing).

**Summary: One nest with 1 young.**

### Site 2:

*In early July, four pairs of nesting owls and 13 young were discovered during staff breeding bird surveys. This small group took over multiple burrows in an area formerly occupied by prairie dogs. Staff requested assistance from additional volunteers who took over observations for the remainder of the summer, while young dispersed throughout the area. Nests were referred to alphabetically from east-to-west for the purpose of reporting.*

July 2, 0845-1030. 3 nests with 10 young and attending adults discovered during breeding bird surveys. An additional 4th nest is possible and needs further observation (Durant and Spaulding).

July 3, 0800-1015. Confirmed the suspected 4th nest further to the west of the cluster of 3 nests discovered on 7/2/18 during standard bird surveys. The 4<sup>th</sup> nest is obscured by weedy patches but at least 3 young observed during frequent feedings performed by adults. If this is added to observations on 7/3, there are at least 13 young from the 4 nests (2, 4, 4, 3).

13 July, 0730-0945. Five adults and 8 young (3, 0, 1, 4; Henson and McCasland).

19 July, 0710-0840. Five adults and seven young, one flying. Nest B: 1 adult, 1 young. Nest C: 1 adult, 3 young. Nest D: 1 adult, 3 young (Henson and McCasland).

July 20, 0915-1030. Observed Nest A: 2 adults on burrows, Nest B: 1 adult plus 2 young on burrow, Nest C: 2 adults and 2 perching young, Nest D: 1 adult visible with several young on burrow but obscured by vegetation (Durant and CPW officer Joe Padia).



26 July, 0715-0900. Nest A: 1 adult, 1 young. Nest B: No adults, 2 young. Nest C: No adults, 2 young flying. Nest D: No adults, 4 young flying (Henson and McCasland).

28 July, 0715-0900. 3, 2, 2 flying, 4 flying.

29 July, 0800-1100. Observed 3 young owls north of trail on fenceline (Wing).

2 August, 0630-0900. Nest A: 3 fledglings. Nest B: 2 fledglings. Nest C: 2 fledglings. Nest D: 2 fledglings (Henson and McCasland).

9 August, 0645-0845. Nest A: 4 young. Nest B: 3 young. Nest C: 1 young. Nest D: 1 young (Henson and McCasland).

16 August, 0630-0830. No adults and 6 fledglings seen (Henson and McCasland).

23 August, 0700-0830. No owls seen (Henson and McCasland).

**Summary: 4 nests, 14 young (4, 3, 3, 4), 13 observed flying**

## Southeast county

### Site 1:

*Boulder County's raptor database has records of nesting burrowing owls in the southeast part of the county dating back to the late 1990's. Most of the southeast grasslands and agriculture areas are categorized as Multiple Objective Areas with areas of cropland categorized as No Prairie Dog Areas, with one parcel managed as Habitat Conservation Area occasionally used for grazing.*

*This year, burrowing owls returned to nest adjacent to a recreational trail, and spurred an immediate six-month trail closure approved by the Boulder County Commissioners. They previously nested in 2006 and 2011, choosing a burrow in the middle of the trail.*

4 April, 0800-0900. One owl approximately 45 m NE of point (Smith).

23 April, 1605. Pair courting and perched on burrow mound (Lahusen).

30 April, 1840-1920. Both adults standing or sitting on suspected nest burrow (Lahusen).

7 May, 1930-2010. "Same owl pair" perched on burrow mound or on fencepost nearby (Lahusen).

21 May, 1825-2002. Adult male perched within 30 m of suspected nest burrow during entire observation (Lahusen).

1 June, 1230-1315. Pair in same location, with female going in and out of burrow (Lahusen).

10 June, 1930-2020. Pair and 5 young in same location (Lahusen).

21 June, NA. Pair and 3 young in same location with fledglings hopping away from the nest burrow and pouncing on prey items (Lahusen).

2 July, 1000-1100. Two young observed (Lahusen).

10 July, 0830-1000. Two adults and three flying young perched on fence posts not far from nest site (Lahusen).

18 July, 1600-1700. One adult, one fledgling, and one perched young (Lahusen).

7 August, 1530-1600. Pair and one fledgling seen at new location near 115 (Lahusen).



PHOTO: Kristi Lahusen, Wildlife Volunteer

18 August, 1100-1145. Pair and two fledglings seen near 115 (Lahusen).

8 September, 1700-1730. Adult pair and three fledglings observed (Lahusen).

22 September. Just one undetermined age observed (Lahusen).

**Summary: One nest, 5 young. 3 fledged.**

**Site 2. unofficially:**

*A burrowing owl nest was observed in the northern part of the southeast quadrant on a privately owned Boulder County Conservation Easement. The parcel, which is managed by the private landowner, hosted a nesting pair which produced 4 young. If burrowing owls return to nest at this location in 2019, the BCPOS Conservation Easement Program Manager may be able to arrange regular monitoring by BCPOS staff or volunteers.*

### **Burrowing Owl Protection Plans**

*Confirmation of a nest site initiates a series of actions involving BPOS staff and agriculture tenants. Applicable staff involved in managing a site usually includes rangers, trails maintenance, and weeds crews, who are given direction to protect and avoid the nest site. Land tenants are contacted and an on-site meeting is scheduled to outline expectations, discuss concerns, and get signatures on a Burrowing Owl Protection Plan. Here is an example of a typical plan:*



## **Boulder County Parks & Open Space Burrowing Owl Protection Plan for [property]**

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### **About Burrowing Owls**

Cowboys sometimes called these owls "howdy birds," because they seemed to nod in greeting from the entrances to their burrows in prairie-dog towns. These owls are small ground dwellers that typically nest in inactive prairie dog burrows. They show greater preference for inactive burrows within active prairie dog towns as compared to completely abandoned towns. Fledgling success is higher, and predation is lower, on active versus inactive towns. However, burrowing owl populations have been declining for many years, owing to prairie dog and ground squirrel control programs, habitat loss, and accidental mortality (many are killed by cars). They're now designated a threatened species by the State of Colorado.

## Why a Protection Plan?

The County's policy on burrowing owls is described in the ***Prairie Dog Habitat Element of the Grassland and Shrubland Management Policy***. This plan is derived from the guidance in that policy. Protection of the site means preventing disturbances to the owls, their nesting activities and rearing their young. It also means maintaining a population of prairie dogs to provide burrows for the owls to nest in, and at the same time, minimizing the negative impacts of prairie dogs on farm and grazing operations. No disturbances are allowed during the burrowing owl nest season which runs from March 15<sup>th</sup> to October 31<sup>st</sup>.

This site is located in a Multiple-Objective Area (MOA). Prairie dog colonies with active burrowing owl nests will not be removed until at least three nesting seasons have passed without recurrent nesting. This period of inactivity reflects the strong nest-site fidelity exhibited by burrowing owls, as most territories are re-used within three years of previous occupation. Burrowing owl habitat in Boulder County is protected in a similar manner by other land management agencies in Boulder County, with the intent to provide comprehensive protections across contiguous lands.

This plan clearly describes the restrictions to agricultural activities and where and when those restrictions apply. The map identifies the nest site. A buffer of 150 feet should be observed for restricted activities.

## Disturbances/Activities Within The Buffer To Be Avoided

- Human presence on foot or horseback
- Presence of tenant-owned domestic pets (dogs), unleashed or otherwise
- Use of any motorized vehicles within close proximity of the nest
- Fencing or other construction within close proximity of the nest site
- Concentrated livestock in the buffer area
- Spraying of pesticides of any kind (i.e. herbicides, insecticides, fungicides, etc.)
- Harrowing, mowing, tillage, or seeding.
- Use of drones over the buffer area
- Storing materials (large hay stacks, manure, and general debris) within the buffer. Owls need an unobstructed view of their surroundings, and large obstructions placed either during the nesting season, or outside the nesting season can change the site characteristics, potentially making the site unsuitable.

## Agreement

As the tenant for this property, I understand and agree to the above Burrowing Owl Protection Plan and will abide by the restriction to my agricultural operations in the area(s) where the owls have nested.

Further, the Boulder County Parks and Open Space Department agrees to maintain open lines of communication with the tenant and offer instruction and guidance about dealing with the Burrowing Owls and the associated prairie dogs on this property, when needed. If, by following this plan, the tenant experiences a loss of agricultural revenue, a request for wildlife damage reparation can be made to BCPOS.

## **Nesting Raptors and Birds of Special Concern**

*Volunteer's avian observations are listed in the records kept by Boulder County wildlife staff. Any observations on nesting raptors are added to the county's GIS Raptor Database, which is shared with Colorado Parks and Wildlife annually through a Sensitive Data sharing agreement.*

### Bald Eagle

15 April, Beech. One perched on property (Latch).

19 April, Rock Creek Farm North 40. Two immatures "frolicking" in air over prairie dog colony (Henley and McCasland).

15 May, Suitts. Second-year Bald Eagle flying over property (Smith).

10 June, Mountain View Egg Farm. One adult being attacked by Red-tailed Hawk (Hansley).

11 June. Imel. One adult perched. (Witkin).

11, 16 July, AHI-Turkey Farm. One adult hunting in prairie dog colony (Bryan, Andes-Georges).

21 July, AHI-Double Dove. One perching (Peyevich).

9 August, AHI-Turkey Farm. One juvenile (Andes-Georges).

### Cooper's Hawk

31 July, Mayhoffer-Singletree. One flew into Cottonwood (Wegman-French).

### Ferruginous Hawk

18 April, Colp. One with prairie dog on the ground near 227 (McCorrison).

10 July, Rock Creek Farm Parrot's-Beak. Three possible perched in Cottonwood tree near 115 (Lahusen).

### Golden Eagle

15 April, Beech. One flying over property (Latch).

25 April, Beech. One flying over carrying prey (Latch).

### Great Horned Owl

14 June, Warembourg. One adult and three fledged juveniles (Lawrence).

### Loggerhead Shrike

12 August, Beech. Shrike species perched on telephone wire (Latch).

### Lark Bunting

7 August, Stevenson-Nelson. One male observed (Redak).

### Northern Harrier

15 April, AHI-Turkey Farm. Pair nest-building and courting in historic nest site southeast of old gate along Prospect Road (Andes-Georges).

17 April, Wolf Run/Centennial Ranch. Male hunting (Redak).

23 April, Dowe Flats. One hunting near 219 (Henson).

29 April, AHI-Turkey Farm. Pair (Bryan).

4 June, Wolf Run/Centennial Ranch. One flying over (Crawford).

### Osprey

3 July, Lagerman. Adult on nest (Andes-Georges).

16 July, Lagerman. Two adults on nest feeding one young (Andes-Georges).

7 August, Imel. One hunting (Smith).

9 August, Lagerman. Two adults and one fledged young (Andes-Georges).

### Red-tailed Hawk (nests only)

23 April, Keyes North. Red-tailed Hawk incubating in cottonwood near 51 (Cass).

26 April, Imel. Pair nesting near 179 (Witkin).

9 August, AHI-Turkey Farm. Pair with fledged young (Andes-Georges).

### Swainson's Hawk

26 April, Imel. Pair in nesting tree (Witkin).

11 June, Imel. Active nest in cottonwood (Witkin).

3 July, Imel. One on nest with visible young (Witkin).

4 June, Deberry. Pair chasing Red-tailed Hawk (Durant).

### Elk

22 July, Dowe Flats. 40-50 on ridge above site (Henson).

### Rattlesnake

22 July, Dowe Flats. One seen (Henson).

## **Other Observations:**

Imel, 29 March. Considerably fewer prairie dogs visible than last year (Witkin).

Warembourg, 17 April. Few prairie dogs remaining in the colony (Lawrence).

Keyes North, 23 April. Few prairie dogs remain (Cass).

Keyes North, 13 July. "There is little likelihood of burrowing owl activity on this property after the 2013 flood and increased agricultural activity since then." (Cass).

Cohig, 8 May. No prairie dogs visible from points 25 four 233 (Wegman-French).

Darby, 9 May. Only two or three actor prairie dog burrows remain at this site (Laubach).

Suitts, 15 May. Few prairie dogs remain on this property (Smith).

Rock Creek Farm North 40, 11 July. White powder apparently being used to poison prairie dogs on burrows just east of the preserve fence line (Henley and McCasland).

*[This was flea powder, which is used to treat the prairie dogs prior to moving them to a holding facility, to the Raptor Rehab Center, or to the Black Footed Ferret facility.]*

Rock Creek Farm North 40, 5 August. Cages scattered around burrows close to eastern fence line (Henley and McCasland).

Liley, 13 July. Few prairie dogs visible possibly because there is almost no green vegetation remaining in the colony (Cass).

Wolf Run/Centennial, 24 July. Access to 141 blocked by new barbed wire fence and closure enforced by cow skull and bones. Volunteer had been harassed previously while doing this point (Crawford).

Mayhoffer-Singletree, 31 July. Black Angus cow had eaten significant portion of rubber tire--they chased it away (Wegman-French).